

Name: _____

Date: _____

A2 CC1: More Practice Solving Exponential and Power Equations

On Separate paper, solve each of the following equations.

1. $3^{5-3x} = 81$

5. $8^{x-2} = \sqrt{8}$

2. $x^{\frac{4}{3}} - 16 = 0$

6. $3x^{\frac{5}{3}} + 96 = 0$

3. $4^{x+1} = \frac{1}{64}$

7. $\left(\frac{25}{4}\right)^x = \left(\frac{125}{8}\right)^{x+2}$

4. $4x^{\frac{2}{3}} - 5 = 11$

8. $(x-3)^{\frac{2}{3}} = 9$

$$9. \ 2^{x^2+2} = 2^{3x}$$

$$13. \ 5 + 7^{3x+2} = 6$$

$$10. \ \left(\frac{1}{3}\right)^{1-x} = 9^x$$

$$14. \ 3(5x+1)^{\frac{3}{4}} + 1 = 25$$

$$11. \ 2^{5-3x} = \frac{1}{16}$$

$$15. \ 2x^{-\frac{3}{2}} - 4 = 12$$

$$12. \ 5x^{\frac{2}{5}} - 3 = 17$$